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MANIPAL UNIVERSITY

MD (PHYSIOLOGY) DEGREE EXAMINATION – APRIL 2007

SUBJECT: PAPER I: GENERAL PHYSIOLOGY, NERVOUS SYSTEM, SPECIAL SENSES

Monday, April 02, 2007

Time: 3 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions. All questions carry equal marks.**

1. Describe the process of excitation – contraction coupling in skeletal muscle. Compare it with that in smooth muscle.
2. Describe the organization and functions of limbic system.
3. Write briefly on:
 - 3A. Taste pathway and disorders of taste perception.
 - 3B. Otolith organs.
4. Discuss in detail the functions, connections and clinical disorders of hypothalamus.
5. 'Feed back loops form the backbone of physiological function'. Discuss the statement.

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MANIPAL UNIVERSITY

MD (PHYSIOLOGY) DEGREE EXAMINATION – APRIL 2007

**SUBJECT: PAPER II: CARDIOVASCULAR & RESPIRATORY SYSTEM,
RENAL PHYSIOLOGY AND BLOOD**

Tuesday, April 03, 2007

Time: 3 Hrs.

Max. Marks: 100

✍ Answer ALL the questions. All questions carry equal marks.

1. Describe the neural regulation of respiration.
2. Explain micturition reflex in detail. Add a note on clinical disorders of urinary bladder.
3. Describe the role of erythropoietic factors in detail. Add a note on the laboratory diagnosis of anemias.
4. Describe how heart rate is regulated. Add a note on cardiac arrhythmias.
5. Explain the cardiovascular changes that occur during muscular exercise.

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MANIPAL UNIVERSITY

MD (PHYSIOLOGY) DEGREE EXAMINATION – APRIL 2007

**SUBJECT: PAPER III: GASTROINTESTINAL TRACT, ENDOCRINOLOGY
AND REPRODUCTION**

Wednesday, April 04, 2007

Time: 3 Hrs.

Max. Marks: 100

✍ Answer ALL the questions. All questions carry equal marks.

1. Discuss the physiological basis of various contraceptive methods and their application to a newly married couple.
2. Describe the role of various hormones in carbohydrate metabolism and their significance.
3. Describe secretory and absorptive capabilities of small and large intestines.
4. Write briefly on the following:
 - 4A. Local hormones.
 - 4B. Gastric emptying.
 - 4C. Thyroid function tests.
 - 4D. Addison's disease.

MANIPAL UNIVERSITY**MD (PHYSIOLOGY) DEGREE EXAMINATION – APRIL 2007****SUBJECT: PAPER IV: RECENT ADVANCES IN PHYSIOLOGY, APPLIED AND
CLINICAL PHYSIOLOGY**

Thursday, April 05, 2007

Time: 3 Hrs.

Max. Marks: 100

✍ **Answer ALL the questions. All questions carry equal marks.**

1. Discuss how sodium ion concentration of body fluids is maintained at normal level inspite of wide variations in the intake of salt.
2. Discuss the pathophysiology of circulatory shock.
3. Describe various methods used to study functions of central nervous system.
4. Write briefly on the following:
 - 4A. Nitric oxide.
 - 4B. Blood brain barrier.

